Abstract

A thermopile IR detector package structure makes use of the silicon micro-electro-mechanical processing technique fabricate an encapsulation having a cavity. The encapsulation is then installed onto a substrate of a detector to seal thermoelectric components on the substrate. In addition to having the sealing function, the encapsulation also has the function of detecting the spectrum and field of view. Next, a carrier substrate is combined with sensing components to form a surface mount device applicable to assembly and fabrication of various related circuits. The thermopile IR detector package structure not only facilitates mass production and reduces fabrication process, material, volume ad weight, but the formed surface mount device is also in agreement with automatically produced electronic components.